

CLAIMS:

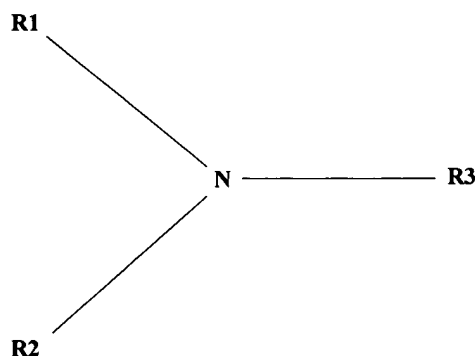
1. A power transmission fluid composition, comprising:

(a) a base oil and

(b) an additive composition comprising:

an ashless dispersant and

an oil-soluble aliphatic tertiary amine component, wherein the oil-soluble aliphatic tertiary amine component comprises an oil-soluble aliphatic tertiary amine of the formula



, wherein the R1 group comprises an alkyl or alkenyl group having about 1 to about 4 carbon atoms, and the R2 and R3 groups independently comprise any one of an alkyl, an alkenyl, an alkoxyalkyl, an alkynyl, an alkylthioalkyl, a haloalkyl, and a haloalkenyl group, having from about 8 to about 100 carbon atoms.

2. The fluid of claim 1, wherein the base oil comprises one or more of a natural oil, a mixture of natural oils, a synthetic oil, a mixture of synthetic oils, and a mixture of natural and synthetic oils.

3. The fluid of claim 2, wherein the natural oil comprises one or more of a mineral oil, a vegetable oil, and a mixture of mineral oil and vegetable oil.

4. The fluid of claim 2, wherein the synthetic oil comprises one or more of an oligomer of an α -olefin, an ester, an oil derived from a Fischer-Tropsch process, a gas-to-liquid stock, and a mixture thereof.
5. The fluid of claim 1, wherein the base oil has a kinematic viscosity of from about 2 centistokes to about 10 centistokes at 100° C.
6. The fluid of claim 1, wherein R2 and R3 independently contain from about 10 to about 50 carbon atoms.
7. The fluid of claim 1, wherein R2 and R3 independently contain from about 12 to about 30 carbon atoms.
8. The fluid of claim 1, wherein the oil-soluble aliphatic tertiary amine component is soluble to a concentration up to about 0.1 wt% at about 25°C in a paraffinic mineral oil having a viscosity in the range of from about 4 to about 6 cSt at about 100°C.
9. The fluid of claim 1, wherein the oil-soluble aliphatic tertiary amine component is present in the fluid in an amount from about 0.05 to about 8 percent by weight.
10. The fluid of claim 1, wherein the oil-soluble aliphatic tertiary amine component is present in the fluid in an amount from about 0.5 to about 1.5 percent by weight.
11. The fluid of claim 1, further comprising one or more of an antioxidant, an antiwear agent, a friction modifier, an antifoam agent, and a corrosion inhibitor.
12. The fluid of claim 1, wherein the ashless dispersant comprises one or more of a hydrocarbyl succinimide, a hydrocarbyl succinamide, a polyol ester, a mixed ester/amide of hydrocarbyl substituted succinic acid, and a Mannich condensation product of hydrocarbyl-substituted phenols, a formaldehyde, and a polyamine.

13. The fluid of claim 1, wherein the fluid is suitable for use in a transmission employing one or more of a slipping torque converter, a lock-up torque converter, a starting clutch, and one or more shifting clutches.

14. The fluid of claim 1, wherein the fluid is suitable for use in a belt, chain, or disk-type continuously variable transmission.

15. A transmission containing the fluid of claim 1.

16. The transmission of claim 15, wherein the transmission comprises one or more of a slipping torque converter, a lock-up torque converter, a starting clutch, and one or more shifting clutches.

17. The transmission of claim 15, wherein the transmission comprises a belt, chain, or disk-type continuously variable transmission.

18. The transmission of claim 15, wherein the transmission comprises an automatic transmission.

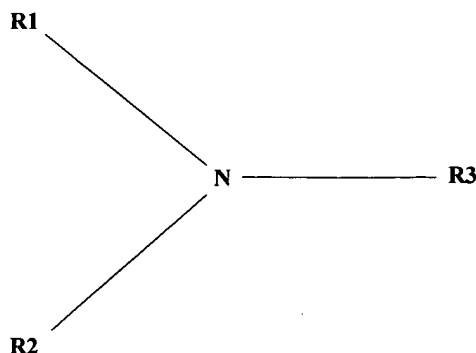
19. A vehicle comprising an engine and a transmission, the transmission including the transmission fluid of claim 1.

20. A method of improving the friction durability of a transmission fluid comprising:

preparing a transmission fluid by adding to a base oil, an additive composition comprising:

an ashless dispersant and

an oil-soluble aliphatic tertiary amine component, wherein the oil-soluble aliphatic tertiary amine component comprises an oil-soluble aliphatic tertiary amine of the formula



, wherein the R1 group comprises an alkyl or alkenyl group having about 1 to about 4 carbon atoms, and the R2 and R3 groups independently comprise any one of an alkyl, an alkenyl, an alkoxyalkyl, an alkynyl, an alkylthioalkyl, a haloalkyl, and a haloalkenyl group, having from about 8 to about 100 carbon atoms.

21. The method of claim 20, wherein the fluid has improved durability compared to a transmission not containing the ashless dispersant and the oil-soluble aliphatic tertiary amine.

22. The method of claim 20, wherein the base oil comprises one or more of a natural oil, a mixture of natural oils, a synthetic oil, a mixture of synthetic oils, and a mixture of natural and synthetic oils.

23. The method of claim 22, wherein the natural oil comprises one or more of a mineral oil, a vegetable oil, and a mixture of mineral oil and vegetable oil.

24. The method of claim 22, wherein the synthetic oil comprises one or more of an oligomer of an alphaolefin, an ester, an oil derived from a Fischer-Tropsch process, a gas-to-liquid stock, and a mixture thereof.

25. The method of claim 20, wherein the base oil has a kinematic viscosity of from about 2 centistokes to about 10 centistokes at about 100° C.

26. The method of claim 20, wherein R2 and R3 independently contain from about 10 to about 50 carbon atoms.

27. The method of claim 20, wherein R2 and R3 independently contain from about 12 to about 30 carbon atoms.

28. The method of claim 20, wherein the oil-soluble aliphatic tertiary amine is present in an amount from about 0.05 to about 8 percent by weight

29. The method of claim 20, wherein the oil-soluble aliphatic tertiary amine is present in an amount from about 0.5 to about 1.5 percent by weight

30. The method of claim 20, wherein providing the additive composition comprises providing an additive composition further comprising one or more of an antioxidant, an antiwear agent, a friction modifier, an antifoam agent, and a corrosion inhibitor.

31. The method of claim 20, wherein the ashless dispersant comprises one or more of a hydrocarbyl succinimide, a hydrocarbyl succinamide, a polyol ester, a mixed ester/amide of hydrocarbyl substituted succinic acid, and a Mannich condensation product of hydrocarbyl-substituted phenols, a formaldehyde, and a polyamine.

32. The method of claim 20 further comprising:
subjecting the fluid to oxidative and thermal stressing.

33. The method of claim 20, wherein improving the durability of the transmission fluid includes improving anti-rattle performance of a continuously variable transmission fluid.

34. The method of claim 20, wherein improving the durability of the transmission fluid includes improving dynamic friction in a 6-speed transmission fluid.

35. The method of claim 20, wherein improving the durability of the transmission fluid includes improving anti-shudder durability in continuously slipping torque converter clutch fluid.

36. The method of claim 20, wherein the transmission fluid is suitable for use in a transmission employing one or more of a slipping torque converter, a lock-up torque converter, a starting clutch and one or more shifting clutches.

37. The method of claim 20, wherein the transmission fluid is suitable for use in a belt, chain, or disk-type continuously variable transmission.